

WHAT IS CLAIMED IS:

1. An ink jet recording device which has a first ink tank for storing an ink, a second ink tank capable of being separated from/connected to the first ink tank through an ink supply path, and a recording head for jetting an ink supplied from the second ink tank, and which carries out recording by jetting an ink from the recording head to a recording medium, the ink jet recording device comprising:
  - measuring means for measuring an elapsed time from an end of the previous recording; and
  - supplying means for supplying an ink from the first ink tank to the second ink tank,wherein the ink supplying means supplies the ink from the first ink tank to the second ink tank if the elapsed time measured by the measuring means is less than a first threshold value; supplies the ink from the first ink tank to the second ink tank after a residual ink is jetted from the second ink tank, if the elapsed time is not less than the first threshold value and less than a second threshold value; and supplies the ink from the first ink tank to the second ink tank, and jets the ink from the second ink tank to supply the ink again, if the elapsed time is not less than the second threshold value.

2. The ink jet recording device according to

claim 1, wherein if the elapsed time is not less than  
the second threshold value, the ink supplying means  
supplies the ink from the first ink tank to the  
second ink tank, and jets the ink from the second ink  
5 tank after an elapse of a predetermined time.

3. The ink jet recording device according to  
claim 2, wherein the predetermined time is 3 seconds  
or more.

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4. The ink jet recording device according to  
claim 1, wherein the supplying of the ink by the ink  
supplying means is carried out before a start of  
recording.

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5. The ink jet recording device according to  
claim 1, further comprising: a pump for generating a  
negative pressure in the second ink tank, wherein the  
pump is driven when the ink is supplied from the  
20 first ink tank to the second ink tank, or when the  
ink is jetted from the second ink tank.

6. The ink jet recording device according to  
claim 1, further comprising: a timer operated by a  
25 battery, wherein the measuring means measures the  
elapsed time based on time information obtained from  
the timer.

7. The ink jet recording device according to claim 1, wherein the measuring means obtains time information from a timer which a device connected to the outside of the recording device has, and measures  
5 the elapsed time based on the time information.

8. An imaging device which has an optical system, and a photoelectric conversion device for converting a light of an object passed through the  
10 optical system into a signal charge, comprising: the ink jet recording device according to claim 1.

9. An ink supplying method in an ink jet recording device which has a first ink tank for  
15 storing an ink, a second ink tank capable of being separated from/connected to the first ink tank through an ink supply path, and a recording head for jetting an ink supplied from the second ink tank, and which carries out recording by jetting an ink from  
20 the recording head to a recording medium, the ink supplying method comprising:

a measuring step of measuring an elapsed time from an end of previous recording;

a comparing step of comparing the elapsed time  
25 measured in the measuring step with a first threshold value or a second threshold value; and

a supplying step of supplying an ink from the

first ink tank to the second ink tank in accordance with a result of the comparison in the comparing step,

wherein in the ink supplying step, the ink is supplied from the first ink tank to the second ink tank if the elapsed time is less than the first threshold value; the ink is supplied from the first ink tank to the second ink tank after a residual ink is jetted from the second ink tank, if the elapsed time is not less than the first threshold value and it is less than the second threshold value; and the ink is supplied from the first ink tank to the second ink tank, and the ink is jetted from the second ink tank to supply the ink again, if the elapsed time is not less than the second threshold value.

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10. The ink supplying method according to claim 9, wherein in the ink supplying step, if the elapsed time is not less than the second threshold value, the ink is supplied from the first ink tank to the second ink tank, and the ink is jetted from the second ink tank after an elapse of a predetermined time.

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